WHAT IS CLAIMED IS:

1. A semiconductor optical device comprising:

a superlattice contact semiconductor region having a superlattice structure, said superlattice contact semiconductor region including a II-VI compound semiconductor region and a first II-VI compound semiconductor layer, said II-VI compound semiconductor region containing zinc, selenium and tellurium, and said first II-VI compound semiconductor layer containing zinc and selenium; and

a metal electrode provided on said superlattice contact semiconductor region, said metal electrode being electrically connected to said first II-VI compound semiconductor layer.

2. The semiconductor optical device according to claim 1,

wherein said II-VI compound semiconductor region includes a second II-VI compound semiconductor layer containing zinc and selenium and a third II-VI compound semiconductor layer containing zinc and tellurium.

3. The semiconductor optical device according to claim 1,

wherein said II-VI compound semiconductor region includes a plurality of second II-VI compound semiconductor layers and a plurality of third II-VI compound semiconductor layers,

wherein each second II-VI compound semiconductor layer contains zinc and selenium,

wherein each third II-VI compound semiconductor layer contains zinc and tellurium,

wherein one of said second II-VI compound semiconductor layers is nearest to said first II-VI compound semiconductor layer,

wherein one of said third II-VI compound semiconductor layers is nearest to said first II-VI compound semiconductor layer,

wherein said nearest third II-VI compound semiconductor layer is provided between said first II-VI compound semiconductor layer and said nearest second II-VI compound semiconductor layer,

and

wherein a thickness of said first II-VI compound semiconductor layer is greater than said nearest second II-VI compound semiconductor layer.

4. The semiconductor optical device according to claim 1,

wherein said II-VI compound semiconductor region includes a plurality of second II-VI compound semiconductor layers and a plurality of third II-VI compound semiconductor layers,

wherein each second II-VI compound semiconductor layer contains zinc and selenium,

wherein each third II-VI compound semiconductor layer contains zinc and tellurium, and

wherein a total thickness of said second II-VI compound semiconductor layers is greater than a total thickness of said third II-VI compound semiconductor layers.

5. The semiconductor optical device according to claim 1,

wherein a thickness of said metal electrode is equal to or larger than 10 nanometers and is equal to or less than 30 nanometers.

6. The semiconductor optical device according to claim 1,

wherein a thickness of said first II-VI compound semiconductor layer is equal to or larger than 2 nanometers.

7. The semiconductor optical device according to claim 1, further comprising:

an active layer of a II-VI compound semiconductor provided on a supporting body, said supporting body including a ZnSe substrate, and said active layer being provided between said ZnSe substrate and said superlattice contact semiconductor region.

8. The semiconductor optical device according to claim 2,

wherein a thickness of said metal electrode is

equal to or larger than 10 nanometers and is equal to or less than 30 nanometers.

9. The semiconductor optical device according to claim 2,

wherein a thickness of said first II-VI compound semiconductor layer is equal to or larger than 2 nanometers.

10. The semiconductor optical device according to claim 2, further comprising:

an active layer of a II-VI compound semiconductor provided on a supporting body, said supporting body including a ZnSe substrate, and said active layer being provided between said ZnSe substrate and said superlattice contact semiconductor region.

11. The semiconductor optical device according to claim 3,

wherein a thickness of said metal electrode is equal to or larger than 10 nanometers and is equal to or less than 30 nanometers.

12. The semiconductor optical device according to claim 3,

wherein a thickness of said first II-VI compound semiconductor layer is equal to or larger than 2 nanometers.

13. The semiconductor optical device according to claim 3, further comprising:

an active layer of a II-VI compound semiconductor provided on a supporting body, said supporting body including a ZnSe substrate, and said active layer being provided between said ZnSe substrate and said superlattice contact semiconductor region.

14. The semiconductor optical device according to of claim 4,

wherein a thickness of said metal electrode is equal to or larger than 10 nanometers and is equal to or less than 30 nanometers.

15. The semiconductor optical device according to claim 4,

wherein a thickness of said first II-VI compound semiconductor layer is equal to or larger than 2 nanometers.

16. A method of forming a contact region for a II-VI compound semiconductor optical device, comprising the steps of:

forming a II-VI compound semiconductor region on a supporting body, said II-VI compound semiconductor region containing zinc, selenium and tellurium;

forming, on said II-VI compound semiconductor region, a first II-VI compound semiconductor layer containing zinc and selenium; and

forming a metal electrode on said first II-VI compound semiconductor layer.

17. The method according to claim 16,

wherein forming a II-VI compound semiconductor region on a supporting body includes the steps of:

forming a second II-VI compound semiconductor layer on said supporting body using a molecular beam epitaxy method, said second II-VI compound semiconductor layer containing zinc and selenium; and

forming a third II-VI compound semiconductor layer on said second II-VI compound semiconductor layer using a molecular beam epitaxy method, said second II-VI compound semiconductor layer containing zinc and tellurium;

wherein a ratio (F_{VI}/F_{II}) of a VI group element flux to a II group element flux is equal to or greater than three in said step of forming a second II-VI compound semiconductor layer on said supporting body; and

wherein a ratio (F_{VI}/F_{II}) of a VI group element flux to a II group element flux is equal to or greater than three in said step of forming a third II-VI compound semiconductor layer on said second II-VI compound semiconductor layer.

18. The method according to claim 16,

wherein forming a II-VI compound semiconductor region on a supporting body includes the steps of:

forming a second II-VI compound semiconductor

layer on said supporting body at a first temperature, said second II-VI compound semiconductor layer containing zinc and selenium, and said first temperature being equal to or less than 250 degrees Celsius; and

forming a third II-VI compound semiconductor layer on said second II-VI compound semiconductor layer at a second temperature, said third II-VI compound semiconductor layer containing zinc and tellurium, and said second temperature being equal to or less than 250 degrees Celsius.

19. The method according to claim 17,

wherein forming a II-VI compound semiconductor region on a supporting body includes the steps of:

forming a second II-VI compound semiconductor layer on said supporting body at a first temperature, said second II-VI compound semiconductor layer containing zinc and selenium, and said first temperature being equal to or less than 250 degrees Celsius; and

forming a third II-VI compound semiconductor layer on said second II-VI compound semiconductor layer at a second temperature, said third II-VI compound semiconductor layer containing zinc and tellurium, and said second temperature being equal to or less than 250 degrees Celsius.

20. A method of forming a II-VI compound semiconductor optical device, comprising the steps of:

forming an active layer on a supporting body, said active layer being made of II-VI compound semiconductor;

after forming an active layer, forming a II-VI compound semiconductor region on said supporting body, said II-VI compound semiconductor region containing zinc, selenium and tellurium;

forming, on said II-VI compound semiconductor region, a first II-VI compound semiconductor layer containing zinc and selenium; and

forming a metal electrode on said first II-VI compound semiconductor layer.